

### City of Columbia Electric Generation and Emissions in 2010

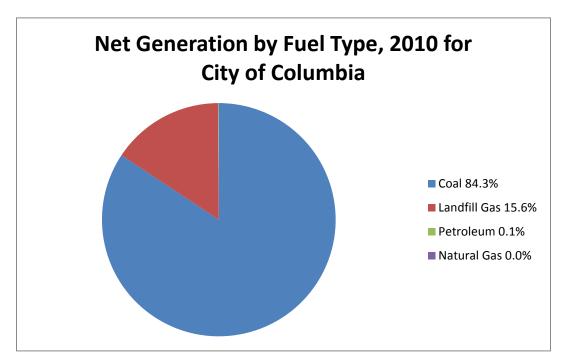
#### **Generation Tables**

|                       | Fuel<br>Consumption,<br>MMBTUs | Percent o | of Total | Net Electric<br>Power<br>Generated,<br>MWh | Percent o | f Total |
|-----------------------|--------------------------------|-----------|----------|--|-----------|---------|
| Non-renewable sources |                                |           |          |  |           |         |
| Coal                  | 966,825                        | 99.8%     | 85.2%    | 69,379                                     | 99.9%     | 84.3%   |
| Natural Gas           | 671                            | 0.1%      | 0.1%     | 29   | 0.0%      | 0.0%    |
| Petroleum             | 860                            | 0.1%      | 0.1%     | 66   | 0.1%      | 0.1%    |
| Nuclear               |                                |           |          |  |           |         |
| Other                 |                                |           |          |  |           |         |
| Non-renewable total   | 968,356                        | 100.0%    | 85.4%    | 69,474                                     | 100.0%    | 84.4%   |
| Renewable sources     |                                |           |          |  |           |         |
| Biomass               |                                |           |          |  |           |         |
| Hydroelectric         |                                |           |          |  |           |         |
| Landfill Gas          | 165,807                        | 100.0%    | 14.6%    | 12,802                                     | 100.0%    | 15.6%   |
| Solar                 |                                |           |          |  |           |         |
| Waste Fuels           |                                |           |          |  |           |         |
| Wind                  |                                |           |          |  |           |         |
| Wood                  |                                |           |          |  |           |         |
| Renewable total       | 165,807                        | 100.0%    | 14.6%    | 12,802                                     | 100.0%    | 15.6%   |
| Grand total           | 1,134,163                      |           | 100.0%   | 82,276                                     |           | 100.0%  |

| Fuel Type                           | <b>Physical Units</b> | <b>Number of Units</b> |
|-------------------------------------|-----------------------|------------------------|
| Anthracite Coal and Bituminous Coal | Short Tons            | 36,907                 |
| Natural Gas                         | MCf                   | 838                    |
| Distillate Fuel Oil                 | Barrels               | 148                    |
| Landfill Gas                        | MCf                   | 414,518                |

4/17/2013







# Power Plant Nameplate information for City of Columbia

| Plant Name       | <b>County Location</b> | Nameplate Capacity (MW) |
|------------------|------------------------|-------------------------|
| City of Columbia |                        | 402.4                   |
| Columbia         | Boone                  | 402.4                   |



# Emissions from Electricity Generated in 2010: City of Columbia

|                  | CO2<br>Equivalent<br>(TONS) | Carbon<br>Dioxide (CO2)<br>(TONS) | Methane<br>(CH4)<br>(TONS) | Nitrogen<br>Dioxide (NO2)<br>(TONS) |
|------------------|-----------------------------|-----------------------------------|----------------------------|-------------------------------------|
| City of Columbia | 3,728,845                   | 436,663                           | 49,246                     | 7,284                               |
| Columbia         | 3,728,845                   | 436,663                           | 49,246                     | 7,284                               |

|                  | Sulfur Dioxide<br>(SO2) (TONS) | Annual Nitrogen<br>Oxide (NOx)<br>(TONS) | Summer Nitrogen<br>Oxide (NOx)<br>(TONS) |
|------------------|--------------------------------|--|--|
| City of Columbia | 1,805                          | 0.0000                                   | 0.0000                                   |
| Columbia         | 1,805                          | 0.0000                                   | 0.0000                                   |



Identified Flue Gas Desulfurization (FGD) controls installed on plants operated by City of Columbia

| Plant | Control Equipment         | <b>Sorbent Type</b> |
|-------|---------------------------|---------------------|
|       | No FGD Controls Installed |                     |

Identified Flue Gas Particulate (FGP) controls installed on plants operated by City of Columbia

| Plant    | <b>Control Equipment</b> |
|----------|--------------------------|
| Columbia | Baghouse, reverse air    |

#### **Notes:**

Generation, emissions and pollution control data include power plants owned by the utility and located in Missouri.

Emissions data calculated by Missouri Department of Natural Resources, Division of Energy, from EIA Fuel Consumption Data

Fuel Consumption and Generation Data from United States Energy Information Administration, Form 923, United States Department of Energy http://www.eia.gov/electricity/data/eia923

Pollution control data (FGD and FGP equipment) from United States Energy Information Administration, Form 860, United States Department of Energy http://www.eia.gov/electricity/data/eia860/index.html

Emissions factors for fuel-based generation from United States Environmental Protection Agency "Emission Factors for Greenhouse Gas Inventories", November 7, 2011, http://www.epa.gov/climateleadership/documents/emission-factors.pdf